REVIEW OF FOREST INSECT PROBLEMS
CONTROL PLANS AND NEEDS
U.S. FOREST SERVICE
REGION ONE

A. Spruce mite (Oligonychus ununguis)

Widespread infestations of spruce mite appeared in 1957 in most of the Douglas-fir stands which were sprayed for spruce budworm control in 1956. The infestation of varied intensity is scattered over 750,000 acres and is located mostly within the 885,000 acres sprayed in 1956 with DDT. Only a very few minor forest infestations of spider mite have been reported in many years. This is the first major spruce mite infestation which has occurred or been recognized during the 10 years of aerial spraying in the west during which over 7 million acres were sprayed with DDT sprays. The infestation may have occurred because of the killing of predacious mites and insects by the DDT in 1956 and by the long dry summer of 1957. Numerous mite infestations were also reported in the field of agriculture during the past summer. Control measures used in the field of agriculture are not applicable in the control of forest infestations. Preventive measures are possible, it is believed, by including an acaracide in the formulation of the DDT insecticide. The damage resultant from forest infestations is not fully known. Entomologists and research personnel are continuing their present investigative studies and are planning a research program which will give information regarding the origin of infestations, the nature and extent of potential damage and the possibility of control and preventive measures.

B. Spruce Budworm (Choristoneura fumiferana)

This insect continues to be a destructive forest pest in the Douglas-fir stands of Montana. There are 2,846,000 acres of spruce budworm infested timber within the State of Montana. Control action has been taken on 2,195,698 acres from 1952 through 1957, including a small acreage in north Idaho. Forty percent of the remaining infested area is in private ownership. The State of Montana is without adequate legislation to facilitate control of forest insect pests on private lands. Control action is therefor entirely dependent upon the cooperation of the private landowner.

The problem of obtaining cooperation for insect control on private lands and the possibility of additional mite infestations have greatly reduced the program of spruce budworm control which was originally planned by the State Forester of Montana and the U. S. Forest Service.

Two areas of spruce budworm infestation on national forest lands are to be sprayed in 1958 to facilitate the research program on spruce mite.

Boulder Unit, Deerlodge N.F. ---------- 30,100 acres
64% defoliation in 1957

Alta Unit, Bitterroot N.F. _____ 22,400 acres
57% defoliation in 1957

Paper presented by G. M. DeJarnette, Forester, U.S. Forest Service, Missoula, Montana, at the annual meeting of the Western Forest Pest Committee held in Seattle, Washington, on December 10, 1957.

There are two areas where timber losses from the spruce budworm will be considerable. The owners and parties involved should seriously consider spraying for spruce budworm control. Timber loss in these areas without spraying is certain. The chance of a mite infestation and timber loss therefrom is much less certain.

Bridger Unit, G llatin N.F. ---------- 241,000 acres
64% private ownership; 1957 defoliation 73%

Crazy Mts. Unit, Gallatin N.F. ---------- 79,000 acres
53.5% private ownership; 1957 defoliation 71%

C. Spruce beetle (Dendroctonus engelmanni)

The spruce bark beetle infestation has largely subsided, but we still continue to have scattered hotspots of infestation. Control action will be continued through logging. Continued detection surveys are needed to promptly spot new infestations and special attention must be given to the protection of residual stands. It is estimated that 100 million bd. ft. of spruce will become infested in C. Y. 1958. Over two billion bd. ft. of spruce have been infested to date in Region One. The combination of a Federal access road program and a tremendously accelerated logging program by industry has resulted in the logging of nearly 1½ billion bd. ft. of infested and salvage spruce. The logging of infested and salvage spruce continues to be an important part of our planned logging program.

D. Black-headed budworm (Acleris variana)

An outbreak of this insect occurred in north Idaho and northwest Montana, covering 32,000 acres. Studies being conducted by the Missoula Forest Insect Laboratory indicate the infestation is subsiding. Observations and studies will be continued. 6,000 acres of black-headed budworm infestation were sprayed in Glacier National Park during the summer of 1957 where it was causing heavy damage to hemlock. Control operations killed over 98% of the budworms.

E. Larch Insects

Four new species of larch defoliators have been found in the forests of north Idaho and Montana. These are the larch budmoth, the larch looper, the larch sawfly, and the larch casebearer. Studies are being conducted on all four of these insects. The larch casebearer has infested nearly 5,000 acres near St. Maries, Idaho. Control measures have not been developed.

The larch budmoth, first observed in 1955, has increased its area of infestation from 33,000 acres to an estimated 250,000 acres in scattered areas. The budmoth may cause a reduction of leaf surface by as much as 50%.

The larch sawfly and looper have been found in fewer numbers and visible damage was slight. Studies and close observations must be continued on all of these larch insects.

F. Douglas-fir Beetle (Dendroctonus pseudatsugae)

Widespread endemic losses still occur due to this forest pest. The only control measure which seems practical is through logging.

G. Western and Mountain Pine Beetles

Infestations from these two insects appear to be at a low level throughout the region.

H. Measures which would facilitate the protection of timber stands against losses from insect and animal damage.

1. The continuation of an aggressive access road construction porgram designed to open up stands of insect-susceptible timber.

2. Continuation on the part of both industry and public forest agencies, of a concerted and correlated educational program directed at the problems of controlling forest pests.

3. Additional research in all phases of forest pest control.

4. Enactment of legislation to facilitate forest pest control on privately owned lands.

5. Acceptance of greater responsibility by public agencies and forest industries for training personnel to recognize, detect and report outbreaks of forest pests.

6. The making of further surveys to determine the extent of porcupine damage.

7. Initiation of a research and control program designed to minimize all animal damage to timber stands.